

Visual Studio Integration for Cafe Platform Tutorial

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Version 1.0.2

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1 Introduction

This document describes how to set up the development environment for users of the Visual Studio Integration for Cafe Platform (hereafter referred to as VSI-Cafe Platform).

2 Setup and Configuration of the Development Environment

This section describes the setup steps needed to use the VSI-Cafe Platform.

2.1 Cafe Development Environment

To set up the Cafe development environment, follow the instructions in the *Cafe CAT-DEV QuickStart Guide* provided in the Cafe SDK documentation.

2.2 VSI-Cafe Platform

2.2.1 Installation

To install the VSI-Cafe Platform, extract the files from the VSI-Cafe Platform package in an appropriate directory, and run the file `setup.exe` located in the `Setup` directory.

In general, the VSI-Cafe Platform installer supports upgrading from a previous installation, but depending on the installed version, it might be necessary to perform a clean installation. In this situation, uninstall the previous version before attempting to install.

Before installation, please refer to the Installation Procedure section of the readme file included in the VSI-Cafe Platform package.

2.2.2 Installation Requirements

Installation of the VSI-Cafe Platform requires the following.

- Installation must be performed by a user with Administrator privileges.
- A version of Visual Studio supported by VSI-Cafe Platform must have been properly installed.

If either of the above conditions is not met, the installation will terminate.

2.2.3 The Confirmation Dialog Box Displayed by the Installer

The VSI-Cafe Platform references the environment variables that store the Cafe SDK and MULTI installation directories.

- | | |
|--------------------------|---------------------------------|
| • <code>CAFE_ROOT</code> | Cafe SDK installation directory |
| • <code>GHS_ROOT</code> | MULTI installation directory |

If either of these environment variables is not configured while performing the installation, confirmation dialog boxes will be displayed.

2.2.3.1 CAFE_ROOT Environment Variable Not Configured

Figure 2-1 CAFE_ROOT Environment Variable Confirmation Dialog Box



Use the **Browse** button to select the installation directory of the Cafe SDK. Then continue the installation process by clicking **Next**.

If you are manually configuring the `CAFE_ROOT` variable, click the **Cancel** button to cancel the installation. Alternatively, proceed with the installation by clicking **Next**, and then manually configure the `CAFE_ROOT` variable when installation is complete.

Warning: The `CAFE_ROOT` environment variable configured during installation is removed when you uninstall VSI-Cafe Platform.

2.2.3.2 GHS_ROOT Environment Variable Not Configured

Figure 2-2 GHS_ROOT Environment Variable Confirmation Dialog Box



Use the **Browse** button to select the installation directory of MULTI. Then continue the installation process by clicking **Next**.

If you are manually configuring the GHS_ROOT variable, click the **Cancel** button to cancel the installation. Alternatively, proceed with the installation by clicking **Next**, and then manually configure the GHS_ROOT variable when installation is complete.

Warning: The GHS_ROOT environment variable configured during installation is removed when you uninstall VSI-Cafe Platform.

2.3 Sample Demo Patch

A patch is provided for VSI-Cafe Platform to build the Cafe SDK demo and NintendoWare for Cafe demo applications in Visual Studio.

Use the following sequence of steps to apply the patch to the sample demo applications.

1. Download the sample demo patch corresponding to the sample demo version in use from the developer support website.
2. Extract the sample demo patch in an appropriate directory, and copy the contents to the sample demo install directory as follows.
 - Cafe SDK demo `cafe_sdk -> cafe_sdk`
 - NintendoWare for Cafe demo `NW_Cafe -> NW_Cafe`

3 Documentation

3.1 Manual

Once the VSI-Cafe Platform has been installed, it may be referenced by selecting **Windows Start -> All Programs -> VSI-Cafe Platform -> VSI-Cafe Platform Manual**.

The manual is saved under the `%VSI_CAFE2_ROOT%Documents` directory.

4 Building the Sample Demo

To demonstrate how to build a project using Visual Studio, this section uses the sample demo referred to in Chapter 2 Setup and Configuration of the Development Environment.

4.1 Loading the Solution File

To load the sample demo solution file, start Visual Studio, and from the menu select **File -> Open -> Project/Solution**. See below for details on demo solution file locations.

- Cafe SDK Demo Demo directory\vs12\DemoName.sln
- NintendoWare for Cafe Demo Demo directory\vs12\DemoName.sln

Depending on the type of demo, it might be necessary to prepare required data beforehand.

Before building the sample demo, see the Notes section of the readme file included in the sample demo patch.

Note: The solution file (.sln) and project file (.vcxproj) included in the sample demo patch are designed for Visual Studio 2010 but may also be used in Visual Studio 2012.

4.2 Building

Build the sample demo as follows.

1. From the menu, select the build configuration using **Build-Configuration Manager -> Active solution configuration**. (**Debug** is the default.)
2. From the menu, select **Build -> Build Solution** to build.

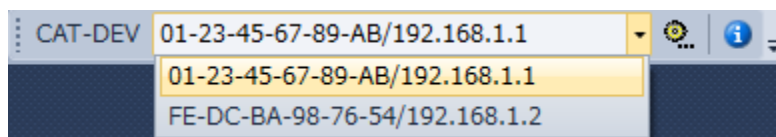
5 Running the Sample Demo

To demonstrate how to run using Visual Studio, this section uses the sample demo described in Chapter 4 Building the Sample Demo.

5.1 Selecting the Target Device

If there is more than one development device registered, please use the **CAT-DEV** menu on the VSI-Cafe Platform toolbar to select the target device. (For only one registered device, selection is not necessary.)

Figure 5-1 VSI-Cafe Platform Toolbar



For more information, see Chapter 7 Features Added to the Visual Studio GUI in *Cafe Platform: Visual Studio Integration*.

5.2 Execution

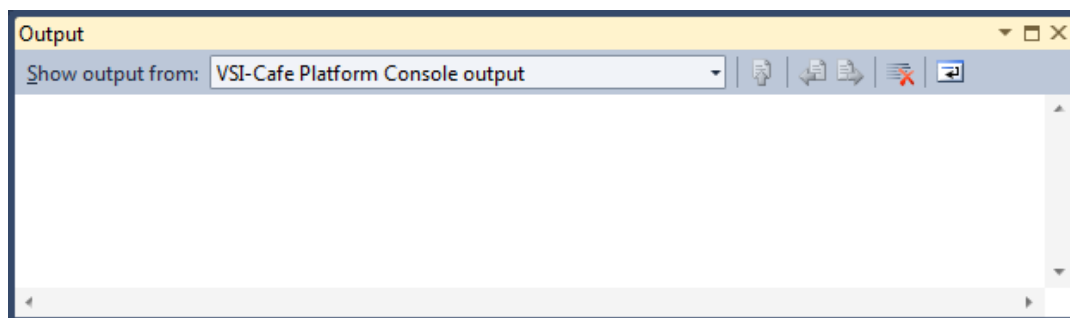
Run the sample demo as follows.

1. Select the appropriate project in the **Solution Explorer**.
2. Select **Set as StartUp Project** from the shortcut menu.
3. From the menu, select **Debug -> Start Without Debugging** to run.

5.3 Debug Output

The debug output produced by the Cafe application is displayed in the **VSI-Cafe Platform** pane of the **Output** window.

Figure 5-2 VSI-Cafe Platform Pane



6 Debugging the Sample Demo

To demonstrate how to debug using Visual Studio, this section uses the sample demo described in Chapter 4 Building the Sample Demo.

6.1 Selecting the Target Device

See Section 5.1 Selecting the Target Device.

6.2 Selecting the Debugger

The VSI-Cafe Platform provides two debugging methods, by using an external debugger or using the debug function of Visual Studio.

To select a debugger, select **Tools -> Options -> VSI-Cafe Platform option -> Debugger -> Use external debugger** from the menu. See below for details.

- External Debugger **Use external debugger** is set to **True**
- Visual Studio Debugger **Use external debugger** is set to **False**

* The default configuration is to use the Visual Studio Debugger.

6.3 Debugging

To debug, please perform the following sequence of steps:

1. Select the appropriate project in the **Solution Explorer**.
2. Select **Set as StartUp Project** from the shortcut menu.
3. From the menu, select **Debug -> Start Debugging** to start debugging.
4. If the External Debugger has been selected, continue the debugging with the external debugger.

6.4 Debug Output

The debug output produced by the Cafe application is displayed differently depending on the debugger that has been selected.

- External Debugger **Output window VSI-Cafe Platform** pane
- Visual Studio Debugger **Output window Debug** pane

7 Creation and Update of a Cafe Project

7.1 Creation

To create a new Cafe project, use the Visual Studio Project Wizard.

For more information, see Chapter 3 Projects in *Cafe Platform: Visual Studio Integration*.

7.2 Update

To update an existing Cafe SDK or NintendoWare for Cafe project, the version information for the Cafe project must be updated.

To update an existing Cafe project, use the Project Updater provided with the VSI-Cafe Platform.

For more information on using the Project Updater, see Chapter 8 Project Updater in *Cafe Platform: Visual Studio Integration*.

8 Creating a Makefile Project

VSI-Cafe Platform supports Makefile Project.

Create a Makefile Project for Cafe as follows.

1. Create a Makefile Project for Win 32 or load an existing Makefile Project.
2. Open **Configuration Manager** from the **Build -> Configuration Manager** menu.
3. From the **Active solution platform** pull-down menu, select **New**.
4. From the **Type or select the new platform** pull-down menu, select **Cafe**.
(Configure the **Copy settings from** as desired. We recommend selecting the **Create new project platforms** check box.)
5. Close the **Configuration Manager** and open the **Property Pages**.
6. From **Configuration Properties -> General -> Configuration Type**, select the makefile and click **Apply**.
7. Configure the filename (`. rpx`) for debug on **Configuration Properties -> NMake -> Output**.

When this process is complete, the **Configuration Properties** Makefile Project is changed to Cafe.

- The property for Cafe is added to **General**.
- **Debugging** is changed to the property for Cafe.
- **Emulation** is added.

For details of the Property, please refer to "Build Options" section of the VSI-Cafe Platform manual.

When **Start Debugging**, **Start Without Debugging** is specified, it can run and debug the file configured on **Configuration Properties -> NMake -> Output**.

Revision History

Version	Revision Date	Category	Description
1.0.2	2015-12-09	Changed	Updated the version number to match the Japanese document. Note: No change was made to the content.
1.0.1	2014-03-03	Changed	Added Chapter 8 Creating a Makefile Project
1.0.0	2014-01-23	—	Initial version.

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